BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, D.C. 20544

In the Matter of:	**)**	**IB Docket No. 09-16**
	)	
Third Annual Report to Congress on Status of Competition in the Satellite Services Market.	**)**	**DA 09-1045**
	)	

SkyBitz, Inc. Comments For Third Annual Report to Congress on Status of Competition in the Satellite Services Market.

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SkyBitz, Inc. ("SkyBitz") submits comments to the Third Annual Report for Congress on the status of the Competition in the Satellite Services Market. We address several specific factors identified in the International Bureau's Public Notice (IB Docket No. 09-16, Released on May 14, 2009) (the "PN") that are relevant to SkyBitz in the context of the Mobile Satellite Services ("MSS") market but do not seek to address every consideration raised in the PN. As a retail provider of MSS, in this filing SkyBitz will focus on (i) the structure of the MSS market, (ii) the degree of concentration in that market, which we consider to be fragmented among the retail MSS providers (iii) the lack of ease of entry and exit from satellite communication services markets specifically from the MSS GEO L-band; (iv) SkyBitz's belief that there is not effective MSS competition for GEO L-band satellite operators and wholesale MSS providers, which we consider to be very concentrated; and (v) finally our view that ancillary terrestrial component ("ATC") could act in the future as a barrier to entry and quite possibly impose significant constraints on the retail MSS market.

ELEMENTS OF MARKET STRUCTURE FOR THE MOBILE SATELLITE SERVICES

In the PN, the International Bureau (the "Bureau") states it will examine the degree of market concentration and ease and exit from the satellite communications service markets including MSS. In addition, the PN requests the number and market share of satellite service providers for MSS services in domestic wholesale; domestic retail; international wholesale; and international retail services.

As background, MSS is a satellite system which uses portable terrestrial mobile terminals to provide wide area connectivity for communication, tracking, supply chain visibility, and remote asset information. MSS mobile terminals may be mounted on a variety of assets including a vehicle, unmanned asset, freight transportation asset (e.g.; shipping container, trailer, truck,) or a rail car.

In this section we provide analysis of the retail MSS market structure that suggests that there is market fragmentation among the retail MSS providers and increased vertical integration (ie; market concentration) being driven from the satellite operator end of the value chain. The view of fragmented retail MSS provider market is based upon the number of MSS providers and the size (ie; revenue) of the participants. These dynamics create a market segment with a substantial lack of ease of entry and exit from MSS.[1]

[1] To the extent that MSS or other satellite providers offer commercial mobile radio services (CMRS) and are part of the CMRS marketplace, discussion of these providers and their services will continue to be included in the Commission's analysis of competitive market conditions with respect to CMRS in the Commission's Annual CMRS Competition Report. *See* the Commission's Fourteenth Annual Report and Analysis of Competitive Market Conditions with Respect to Commercial Mobile Services, WT Docket No. 09-66, *Public Notice*, DA 09-1070 (WTB, released May 14, 2009). *See also* 47 C.F.R. § 20.9(a)(10).

MSS analysis includes comments on the major participants within the MSS market.. Competitive drivers within the MSS market include; geography, regulatory, mergers, acquisitions, consolidation, and, vertical integration of the MSS market (ie; value chain). The major participants in the MSS market are:

(i) Satellite Operators;

(ii) Wholesale Re-Sellers of Satellite Service

(iii) Retail Satellite Service Providers; and

(iv) Mobile Terminal Hardware Providers;

The MSS competitive landscape for Satellite Operators within the U.S. includes; Orbcomm, GlobalStar, Iridium. SkyTerra (formerly MSV), and Inmarsat. The relative comparison between these satellite operators in terms of data rates and geographic coverage of their satellite service is shown in the Figure 1.

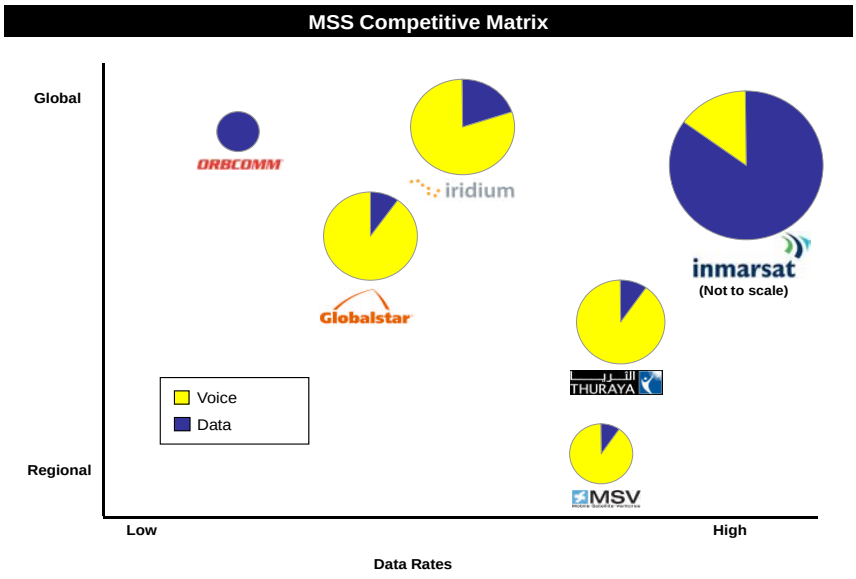


Figure 1 : Source, Raymond James & Assoc, Satellite Communications 2008

The MSS Competitive Matrix in Figure 1, illustrates the lack of competition in the Low Data Rate ("LDR") segment of the market. Wherein there is only two satellite operators that are (almost) solely focused on serving the LDR market (ie; Orbcomm and Inmarsat). For comparison purposes, the competitive positioning of the various satellite operators is provided in Figure 2.

Competitive Positioning of Major MSS Players

	Footprint	Data Rates	Terminal Prices	Satellite Redundancy	End-Market Strength		
					Maritime	Aero	Land
inmarsat	Global (ex-Poles)	492 Kbps	$$$$	★★★	★★★★	★★★★	★★★
THURAYA	Multi-regional	400 Kbps (mid-2008)	$$	★★	★★	★	★★
iridium	Global	128 Kbps (mid-2008)	$$	★★★★	★★★	★★★	★★★
MSV	Regional	4.8 Kbps	$$$	★★			★★
Globalstar	Multi-regional	9.6 Kbps	$$	★	★★		★★
ORBCOMM	Global	2.4 Kbps	$	★★★★	★★		★★★★

Figure 2 : Source, Raymond James & Assoc, Satellite Communications 2008

Other satellite operators participate in the LDR portion of the market however the tendency is to approach retail subscriber pricing from the perspective of higher data rate voice services. Figure 3, illustrates the monthly average revenue per user ("ARPU") history for Inmarsat which is an order of magnitude (ie; 10x) higher than for LDR machine-to-machine ("M2M") applications earned by MSS service providers in the U.S..

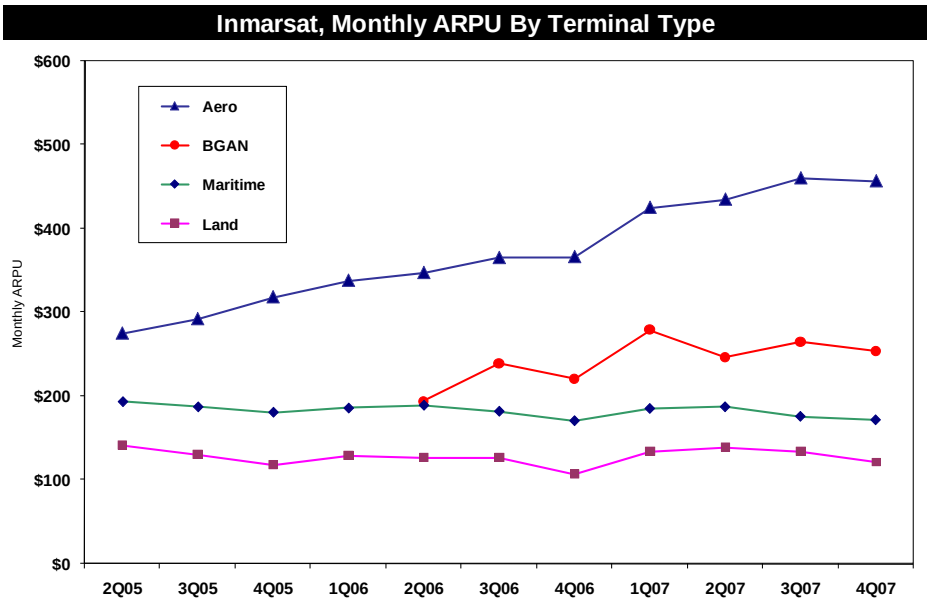


Figure 3 : Source, Raymond James & Assoc, Satellite Communications 2008

As described above in the context of ARPU, the analysis of the structure of the MSS market needs to be described in terms of the MSS market segment being served. To provide and understand the market, we would briefly note that SkyBitz is a retail satellite service provider of wireless solutions to the commercial freight industry delivering a total solution for the effective management of an organization's mobile resources thereby increasing asset utilization while reducing overall operational costs. SkyBitz's solution provides complete supply chain visible and pallet level asset tracking from the shipper's dock to the retail store stock. SkyBitz is also a provider of the mobile terminal hardware. The primary target markets for SkyBitz are the for-hire truckload and less-than-truckload transportation companies, oil & gas and chemical transportation services, railroad and railcar operators and public safety and government agencies within the U.S. The

SkyBitz MSS solution provides the effective means to manage and optimize the operational efficiencies of the companies within these market segments.

In general, mobile satellite service provider companies in the U.S. serve commercial customers, U.S. government agencies (such as the Department of Defense and Department of Homeland Security), Federal Law Enforcement, state and local governments, the U.S. military, first responders and local public safety authorities, as well as consumers. Hundreds of thousands of government, commercial and consumer end-users are now using services from MSS providers to ensure the safety and security of their goods, cargos, assets, and personnel. In a typical month, MSS providers offer unique and critical services and support for public safety authorities, including but not limited to responding to:

(i) Theft and recovery of stolen goods, cargos, and assets;

(ii) Illegal use and routing of mission critical goods, cargos and assets;

(iii) Homeland security notification and distress alerts for driver safety;

(iv) Emergency, accident assistance and roadside services;

(v) The tracking of vehicles either for law enforcement or personal purposes;

(vi) The tracking of sensitive international cargo between the United States, Canada, Mexico, and elsewhere in the world; and

(vii) The tracking of illegal immigration and criminal activities across North America and within the United States.

An estimate of the global machine-to-machine ("M2M") market size and applications for the types of MSS services described above is shown in Figure 4.

Global M2M Market Size and Applications				
Market Sector	2006 Mkt. Size*	2006 Mkt. Penetration	Application	Benefit
Commercial Transportation	76.4	2.7%	Position reporting, engine diagnostics, compliance/tax reporting, cargo monitoring	Improved productivity, reduced fuel costs, real-time tracking of cargo, monitor driver safety and performance
Heavy Equipment	7.1	12.5%	Position reporting, engine diagnostics, usage tracking, emergency notification	Improved fleet productivity, ability to anticipate spare parts requirements
Fixed Asset Monitoring	364.4	0.6%	Unit diagnostics, usage tracking, remote monitoring/control, automated meter reading	Ability to manage and control remote assets, improved maintenance scheduling
Marine Vessels	49.6	3.2%	Position reporting, two-way messaging, weather reporting, engine diagnostics	Compliance with safety and other regulations, emergency weather reporting, search and resue aide
Government & Homeland Security	159.1	1.8%	Container tracking, environmental monitoring, border monitoring, vehicle tracking	Low-cost and efficent compliance reporting, real-time environmental monitoring, border security

*Note - Global market size measure in millions of units.

Figure 4 : Source, Raymond James & Assoc, Satellite Communications 2008

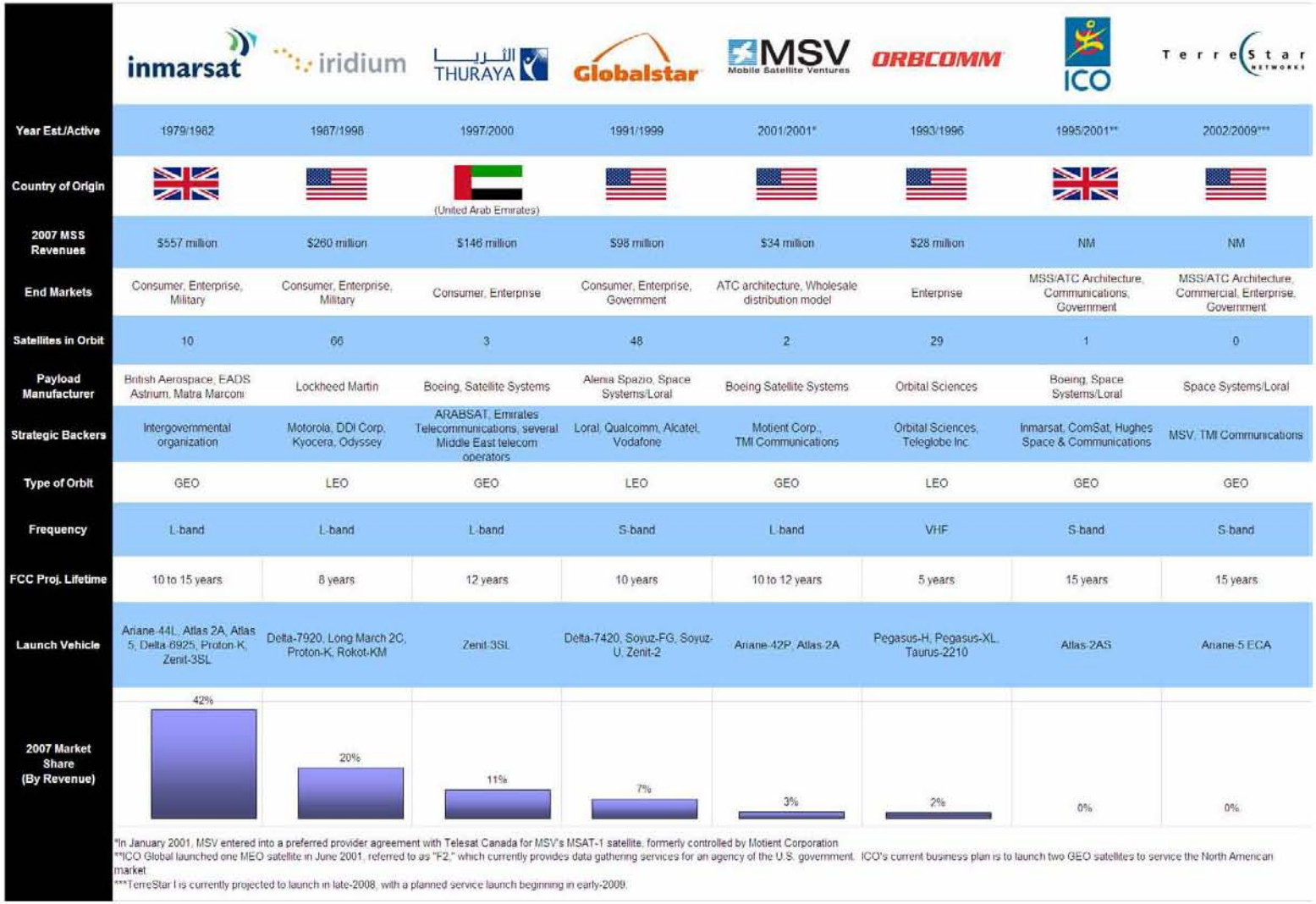
The L-band is essential in the provision of MSS services due to its favourable atmospheric performance, specifically in adverse weather, and its ability to establish a satellite communication link with a small form factor mobile terminal antenna. Additionally, geosynchronous ("GEO") L-band satellites are capable of providing large geographic footprints with bi-directional, low latency, low data rate point-to-point communication links, which are ideally suited for MSS applications, specifically with respect to security and safety applications As a result, the GEO L-band is uniquely situated to serve MSS providers and other L-band users providing security and safety applications because it is the most cost effective and efficient platform. Consequently, an accessible, efficient, affordable and reliable L-band satellite communication infrastructure is at the heart of MSS providers' capability to provide these services and serve the public, which is why MSS providers require L-band satellite capacity.

From a technical perspective, there are no viable alternatives to the L-band that are capable of meeting the performance and technical metrics described above. Therefore, as the PN inquires, the market concentration of these providers is problematic in the L-band and there is a lack of ease of entry and exit into this market. Figure 5, highlights the differences in frequency bands, geographic coverage, satellite orbit, and end markets for the various Satellite Operators. As can be seen in this figure, there is virtually no competition between these satellite operators. Additionally, there are no standards for frequency bands, communication channel bandwidths, power levels, modulation schemes, etc. to ensure there is an opportunity for competition and interoperability for MSS service provider solutions. For example, very high frequency ("VHF") and Ku bands, impose challenges for antenna designs that require directionality (e.g. signal seeking) or physically large antennas, making them impractical for MSS applications. Since VHF electromagnetic transmissions are limited to shorter ranges, they are better suited for non-GEO MSS applications due their range limitations. Ku Band satellite links typically have been designed for the unidirectional supply of large data volumes, such as the Internet or multimedia, to a large number of subscriber terminals (in the tens of millions). These uplinks are complex and require the development of additional proprietary inventions, which makes it impractical for use in MSS applications. Consequently, VHF and Ku bands do not offer a reasonable alternative to the L-band.

Another theoretical alternative to GEO L-band are the low-earth orbit ("LEO") satellites which also impose major challenges for MSS applications. The LEO satellite

network is a constellation of satellites orbiting the earth that don't have the right characteristics to serve MSS applications efficiently because each satellite provides a relatively small geographic footprint. This smaller geographic footprint combined with the large orbital spacing between satellites results in higher latency in the satellite communication link, which is unacceptable to L-band end-users.

For example, Globalstar's LEO constellation is located in the L-band, but is not a viable alternative due to the fact that (i) the current satellite constellation is only functional for mobile originated messages (i.e.; Simplex), (ii) Globalstar utilizes S-Band in the forward path and L-band in the return path and (iii) Globalstar can provide a two-way communications but with a latency of thirty minutes to four hours since the forward path functions only on a certain number of satellites.



	inmarsat	iridium	THURAYA	Globalstar	MSV Mobile Satellite Ventures	ORBCOMM	ICO	TerreStar NETWORKS
Year Est./Active	1979/1982	1987/1998	1997/2000	1991/1999	2001/2001*	1993/1996	1995/2001**	2002/2009***
Country of Origin			(United Arab Emirates)					
2007 MSS Revenues	$557 million	$260 million	$146 million	$98 million	$34 million	$28 million	NM	NM
End Markets	Consumer, Enterprise, Military	Consumer, Enterprise, Military	Consumer, Enterprise	Consumer, Enterprise, Government	ATC architecture, Wholesale distribution model	Enterprise	MSS/ATC Architecture, Communications, Government	MSS/ATC Architecture, Commercial, Enterprise, Government
Satellites in Orbit	10	66	3	48	2	29	1	0
Payload Manufacturer	British Aerospace, EADS Astrium, Matra Marconi	Lockheed Martin	Boeing, Satellite Systems	Alenia Spazio, Space Systems/Loral	Boeing Satellite Systems	Orbital Sciences	Boeing, Space Systems/Loral	Space Systems/Loral
Strategic Backers	Intergovernmental organization	Motorola, DDI Corp, Kyocera, Odyssey	ARABSAT, Emirates Telecommunications, several Middle East telecom operators	Loral, Qualcomm, Alcatel, Vodafone	Motient Corp., TMI Communications	Orbital Sciences, Teleglobe Inc.	Inmarsat, ComSat, Hughes Space & Communications	MSV, TMI Communications
Type of Orbit	GEO	LEO	GEO	LEO	GEO	LEO	GEO	GEO
Frequency	L-band	L-band	L-band	S-band	L-band	VHF	S-band	S-band
FCC Proj. Lifetime	10 to 15 years	8 years	12 years	10 years	10 to 12 years	5 years	15 years	15 years
Launch Vehicle	Ariane-44L, Atlas 2A, Atlas 5, Delta-6925, Proton-K, Zenit-3SL	Delta-7920, Long March 2C, Proton-K, Rokot-KM	Zenit-3SL	Delta-7420, Soyuz-FG, Soyuz-U, Zenit-2	Ariane-42P, Atlas 2A	Pegasus-H, Pegasus-XL, Taurus-2210	Atlas-2AS	Ariane-5 ECA
2007 Market Share (By Revenue)	42%	20%	11%	7%	3%	2%	0%	0%

*In January 2001, MSV entered into a preferred provider agreement with Telesat Canada for MSV's MSAT-1 satellite, formerly controlled by Motient Corporation
**ICO Global launched one MEO satellite in June 2001, referred to as "F2," which currently provides data gathering services for an agency of the U.S. government. ICO's current business plan is to launch two GEO satellites to service the North American market.
***TerreStar I is currently projected to launch in late-2008, with a planned service launch beginning in early-2009.

Figure 5 : Source, Raymond James & Assoc, Satellite Communications 2008

Finally, any instance where the interface between the mobile terminal and the satellite is controlled by a subscriber modem that handles movement of data across the physical layer of the satellite network (as with Iridium) cannot provide an acceptable alternative to L-band capacity. When satellite network access is limited to the data link layer, or at higher OSI model layers, it precludes innovation and advancement in application specific RF modulation techniques, waveforms for maximizing link margin, and multiplexing technologies optimized for the LDR application. Figure 6, provides an example of unit cost challenges imposed by this modem restriction. The LDR market is an extremely price elastic market where scale cannot be achieved with such expensive subassemblies for satellite communications. The range of affordable pricing for the LDR market is <$50 in production volumes for the satellite communications function of a mobile terminal.

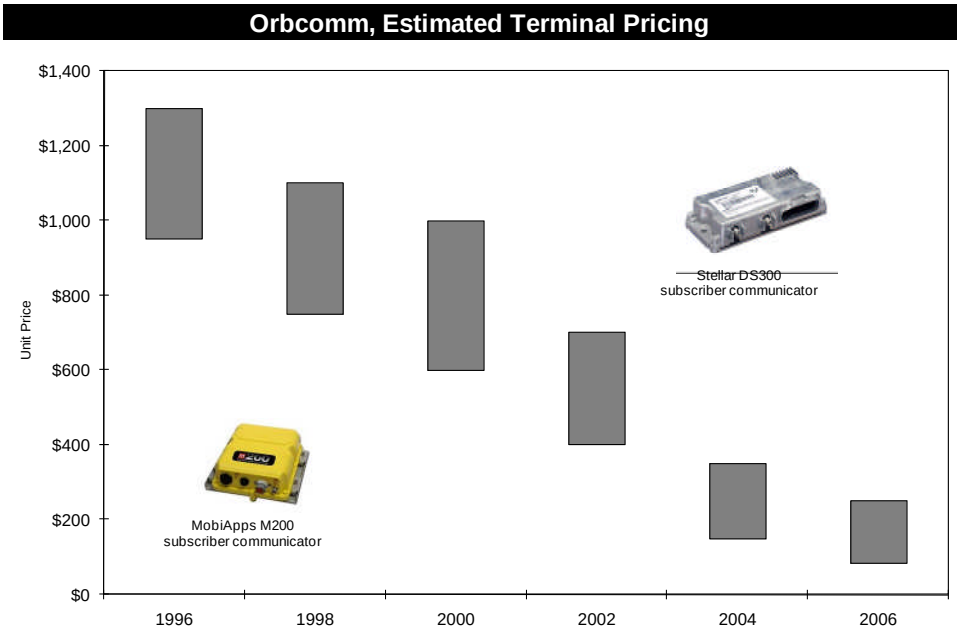


Figure 6 : Source, Raymond James & Assoc, Satellite Communications 2008

Consequently, the technology advances for low latency, power efficient LDR solutions will be lost in situations where a MSS provider is required to utilize a modem as described above. Typically, the message delivery time (or "latency") depends on the specific modem set-up, message size and location of the remote mobile terminal. For example, in the continental United States, Orbcomm (who provides service through subscriber modems) was committed to providing 90% of all message traffic in six minutes or less, and 98% of all message traffic in fifteen minutes. Therefore, any satellite capacity providers that include a framework where a physical layer interface is controlled by a modem and where the data link layer is non-deterministic cannot provide viable alternatives to the L-band. A comparison of other custom modem based M2M solutions is shown in Figure 7.

Comparison of Satellite-Based M2M Solutions

Service Provider	Orbcomm	Iridium	Globalstar	OmniTRACS
Device name				
	MobiApps M200	9601 SBD Transceiver	AXTracker MMT	OmniTRACS
Device cost	$400 to $500	$250 to $300	$150 to $200	$2,000
Frequency band	VHF	L-band	L-band	Ku-band
Communications	Two-way	Two-way	One-way	Two-way
Data rate	2.4 Kbps	2.4 Kbps	N/A	???
Response time	Average of 3 minutes (Variable on Latitude)	Immediate & Uniform	Minutes	2 to 15 minutes
Network coverage	Global	Global	Multi-regional	Multi-Regional
2006 Operator ARPU*	$5.75	$20.00	$6.91	N/A

*Note - Reflects the monthly average revenue per user (ARPU) as recognized by the system operator. Reseller ARPU can vary depending on the nature of the application.

Figure 7 : Source, Raymond James & Assoc, Satellite Communications 2008

Even if, from a technological perspective, any acceptable alternatives to the GEO L-band existed, it would be extremely difficult for end-users to migrate to a different band, as there is no technical or economically feasible commercial solution to allow migration of the existing customer base to a different frequency band. Even if such a solution were developed, these remote assets are scattered across the entire United States, Canada, and Mexico and many are placed in remote areas which are not easily accessible, making it impossible to retrofit L-band hardware while assuring reliable, uninterrupted delivery of services to the existing government and commercial customers. Therefore, we conclude that within the GEO-L band there is satellite operator market concentration and that technically there are no other alternatives available to retail MSS providers, making entry and exit into this market fraught with challenges. Additionally, the fragmentation of the retail MSS service providers results in an inability to achieve volume to leverage economies of scale for these expensive modem based options.

SATELLITE SERVICE PROVIDER (FOR MSS SERVICES) CONDUCT

The Bureau seeks comment on what the specific criteria should be used to determine whether there is effective competition among the domestic and international service providers which isn't defined in the 1962 Satellite Communications Act. However, the Bureau notes that in the 1995 Foreign Carrier Entry Order, the Commission stated that "[e]ffective competition means competition among service providers in a

market that benefits consumers by expanding service offerings, promoting development of innovative technology, and lowering prices."[2]

Based on SkyBitz's experience, we would define the criteria of effective competition as follows: (i) Fair and equitable access to regulated L-band satellite capacity; (ii) No un-do barriers for use of satellite capacity, specifically, options to utilize L-band spectrum at the physical layer; (iii) Reasonable capacity pricing based on market segment being served (i.e.; the LDR market is a low Average Revenue Per Unit/low margin market requiring equitable revenue sharing throughout the value chain).

SkyBitz does not believe effective competition exists in the GEO L-band today. Despite the clear benefits of using the GEO L-band for unique applications developed for targeted customer segments, the GEO L-band remains a unique marketplace with very little competition. Currently, Inmarsat plc ("Inmarsat") and SkyTerra Communications, Inc. and SkyTerra (Canada) Inc. (collectively "SkyTerra") are the only direct providers of GEO L-band capacity to MSS providers and other end-users in the North American market. This limited competition is especially troubling because both Inmarsat and SkyTerra have a major common shareholder, Harbinger Capital Partners ("Harbinger")[3] who is seeking FCC approval to transfer control of SkyTerra Subsidiary LLC, a Commission licensee, from SkyTerra Communications, Inc. to Harbinger. The limited

[2] Market Entry and Regulation of Foreign-Affiliated Entities, *Report and Order*, 11 FCC Rcd 3873, para. 1 (1995).

[3] *Harbinger holds approximately 49 percent of the equity and approximately 48 percent of the voting interests in SkyTerra Communications Inc., along with warrants for additional voting shares in SkyTerra Communications Inc. In addition, based on publicly available information, Harbinger holds approximately 29 percent of the issued and outstanding voting shares of Inmarsat plc and holds convertible bonds in Inmarsat plc.*

state of competition among L-band capacity providers should be of special concern due to the implications for MSS providers and other L-band end-users that depend exclusively on the GEO L-band.

MARKET ENTRY CONDITIONS

The overall lack of existing competition within the L-band is troubling for MSS providers and other end-users that depend exclusively on the L-band due to their existing embedded technology which is already deployed in hundreds of thousands of mission critical assets and vehicles across North America. The unique and beneficial technological attributes of the L-band (when compared to other satellite capacities) means a company like SkyBitz faces:

(i) substantially lessened competition in the provision of L-band satellite communication services;

(ii) the potential for innovation to be stifled and delay in deployment of advanced satellite services to end-users;

(iii) result in higher prices of MSS services for end-users;

(iv) threatened competition for end-users; and

(v) an increase in the likelihood of L-band end-users experiencing disruption in MSS services, which will jeopardize the success of critical law enforcement and homeland security applications and endanger the security and safe operation of assets held by private sector clients and MSS providers.

One barrier to entry that SkyBitz believes merits discussion is the ATC. While general rules for ATC were approved by the Commission in 2003, to date only Globalstar, SkyTerra and ICO have been approved to operate ATC. Although to date, we would note that none of the approved companies (see Figure 9) have actually deployed operational ATC networks. SkyBitz believes ATC could become a new barrier to market entry and quite possibly existence for retail MSS providers. Simply, by focusing on higher data rate, higher ARPU applications only affordable by business customers (ie; not a consumer pricing model) will result in the FCC licensed spectrum for MSS being utilized to offer cellular services already deployed in the cellular and PCS frequency bands. By 2012, SkyTerra will have a new interface that will require SkyBitz's end users to have to adapt to a new interface and therefore force a cost on them that will be disadvantageous. This is a market barrier that will render the FCC licensed MSS L-Band unusable for any legacy installed based (ie; the estimated $100M to $1B invested in L-Band mobile terminal hardware by U.S. commercial and government customers).

	ATC License	ATC Built	Band	Satellites In Orbit	Business Plan*
MSV Mobile Satellite Ventures	Yes (2004)	No	L-band	2 (GEO)	A "carrier's carrier" wholesale model where strategic partners and other wholesale customers use the network to provide differentiated broadband services to their subscribers.
ICO	No	No	S-band (US-only)	1 (MEO)	Trial of mobile interactive media services begins in 2008 in two U.S. cities using DVB-SH mobile broadcasting standard to provide IP data communication services, a full suite of interactive mobile video products and interactive navigation.
TerreStar Networks	No	No	S-band	0	A "carrier's carrier" model where satellite is used to offer services and fill in coverage gaps through partnerships with existing wireless carriers – building terrestrial infrastructure only where demanded by customer requirements or where there is inadequate cellular infrastructure.
Globalstar	Yes (2006)	No	S-band L-band (US-only)	48 (LEO)	Joint ventures or other partnership arrangements with industry players to fulfill requirements for new spectrum-dependent products and services. LEO satellite spectrum is international asset, so similar arrangements also are possible in other countries.

Figure 9 : Source, Raymond James & Assoc, Satellite Communications 2008

MSS COMPETITIVE LANDSCAPE & ANTI-COMPETITVE THREATS

SkyBitz believes the MSS market with respect to the GEO L-band is not competitive and that there is a lack of ease of entry and exit due to the unique attributes of the GEO-L band and lack of viable alternatives. The overall lack of existing competition within the L-band is troubling for MSS providers. For end-users that depend exclusively on the L-band due to their existing embedded technology for mission critical assets, SkyBitz remains concerned that no alternatives exist to serve such customers and believes the landscape is anti-competitive and does not serve the public interest.